

TEST REPORT

Test Report No.: UL-RPT-RP10295085JD01K V2.0

Manufacturer : Sony Mobile Communications Inc.

FCC ID : PY7PM-0800

Technology : ANT+

Test Standard(s) : FCC Part 15.249 Subpart C

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- 2. The results in this report apply only to the sample(s) tested.
- 3. The sample tested is in compliance with the above standard(s).
- 4. The test results in this report are traceable to the national or international standards.

5. Version 2.0 supersedes all previous versions.

Date of Issue:

01 August 2014

Checked by:

Sarah Williams

Engineer, Radio Laboratory

Issued by:

pp

John Newell Group Quality Manager Basingstoke, UL VS LTD



This laboratory is accredited by UKAS. The tests reported herein have been performed in accordance with its' terms of accreditation.

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1. Customer Information

Company Name:	Sony Mobile Communications Inc.
Address:	Nya Vattentornet Mobilvägen 10 Lund 22188 Sweden

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2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.249
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Section 15.249
Specification Reference:	47CFR15.207 and 47CFR15.209
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Sections 15.207 and 15.209
Site Registration:	209735
Location of Testing:	UL VS LTD, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Dates:	17 June 2014 to 18 June 2014

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.207	Transmitter AC Conducted Emissions	②
Part 15.249(a)(e)	Transmitter Fundamental Field Strength	Ø
Part 15.35(c)	Duty cycle	Note 1
Part 2.1049	Transmitter 20 dB Bandwidth	②
Part 15.249(d)(e)/15.209(a)	Transmitter Radiated Emissions	Ø
Part 15.249(d)/15.209(a)	Transmitter Band Edge Radiated Emissions	Ø
Key to Results		

Note(s):

1. The measurements were performed to assist in the calculation of average Fundamental Field Strength and radiated emissions as the EUT was not constantly transmitting

2.3. Methods and Procedures

Reference:	ANSI C63.4 (2009)
Title:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
Reference:	ANSI C63.10 (2009)
Title:	American National Standard for Testing Unlicensed Wireless Devices

2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

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3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

3.1. Identification of Equipment officer rest (EOT)			
Sony			
004402452705373 (Radiated sample)			
CB5A1Z7PKX			
A			
ATPV: 1283-9868, 0_25_3_16_A			
PY7PM-0800			
Sony			
004402452706090 (Conducted sample with RF port)			
CB5A1Z7PGC			
A			
ATPV: 1283-9868, 0_25_3_16_A			
PY7PM-0800			
Sony			
AC Charger			
EP880			
Monoprice			
MHL Cable			
Not marked			
Sony			
MHL Adaptor			
IM750			
Sony			
USB Cable			
EC803			
Sony			
Deskstand			
DK43			

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Identification of Equipment Under Test (EUT) (continued)

Brand Name:	Sony
Description:	PHF
Model Name or Number:	MH410c

3.2. Description of EUT

The equipment under test (EUT) was a GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac + NFC & ANT+.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Tested Technology:	ANT+		
Power Supply Requirement:	Nominal	3.8 VDC	
Type of Unit:	Transceiver		
Modulation:	GFSK		
Transmit Frequency Range:	2400 to 2483.5 MHz		
Transmit Channels Tested:	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	1	2403
	Middle	39	2441
	Тор	78	2480

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3.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	2 GB Micro SD Card
Brand Name:	Generic
Model Name or Number:	Not marked
Description:	22" High Definition Television

Description:	22" High Definition Television
Brand Name:	Logik
Model Name or Number:	L22FE12A
Serial Number:	1309020661

Description:	Laptop
Brand Name:	Dell
Model Name or Number:	E5410
Serial Number:	UL Number 00763

Description:	Test jig
Brand Name:	Not marked
Model Name or Number:	Not marked
Serial Number:	Not marked

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4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

The EUT was tested in the following operating mode(s):

Transmit Mode: transmitting with a GFSK modulated signal on the bottom, middle and top channels as required.

4.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

- Transmit tests: The laptop PC with the customers' test application was used to place the EUT into ANT+ test mode. Operating channels were selected in the test mode.
- Transmitter radiated spurious emission tests were performed with the following configurations, employing all available accessories:
 - Configuration 1 Handset with the AC charger, USB Cable, MHL cable (terminated in to a television), MHL adaptor and PHF.
 - Configuration 2 Handset with the AC charger, USB Cable, Deskstand and PHF.

Pre-scans below 1 GHz were performed in both configurations 1 and 2, with final measurements limited to the configuration which provided worst case results. Pre-scans above 1 GHz were performed in the configuration that employed the most accessories (Configuration 1), with any final measurements being performed in both configurations.

- The conducted sample with IMEI 004402452706090 was used for the 20 dB bandwidth test.
- The radiated sample with IMEI 004402452705373 was used for all other tests.

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5. Measurements, Examinations and Derived Results

5.1. General Comments

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to *Section 6. Measurement Uncertainty* for details.

In accordance with UKAS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

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5.2. Test Results

5.2.1. Transmitter AC Conducted Spurious Emissions

Test Summary:

Test Engineer:	Andrew Edwards	Test Date:	18 June 2014
Test Sample IMEI:	004402452705373		

FCC Reference:	Part 15.207
Test Method Used:	As detailed in ANSI C63.10 Section 6.2 referencing ANSI C63.4

Environmental Conditions:

Temperature (℃):	25
Relative Humidity (%):	42

Results: Live / Quasi Peak

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.218	Live	24.7	62.9	38.2	Complied
0.222	Live	24.4	62.7	38.3	Complied
0.456	Live	21.4	56.8	35.4	Complied
4.466	Live	18.0	56.0	38.0	Complied
5.352	Live	21.8	60.0	38.2	Complied
6.167	Live	21.5	60.0	38.5	Complied

Results: Live / Average

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.245	Live	15.5	51.9	36.4	Complied
0.434	Live	17.9	47.2	29.3	Complied
0.434	Live	17.9	47.2	29.3	Complied
4.524	Live	13.4	46.0	32.6	Complied
5.393	Live	13.7	50.0	36.3	Complied
6.212	Live	13.8	50.0	36.2	Complied

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Transmitter AC Conducted Spurious Emissions (continued)

Results: Neutral / Quasi Peak

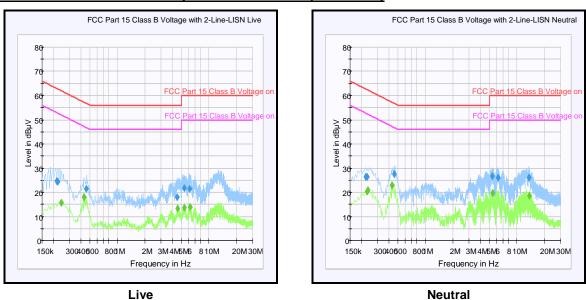
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.222	Neutral	26.4	62.7	36.3	Complied
0.231	Neutral	26.3	62.4	36.1	Complied
0.456	Neutral	27.6	56.8	29.2	Complied
5.370	Neutral	26.6	60.0	33.4	Complied
6.203	Neutral	26.0	60.0	34.0	Complied
13.520	Neutral	26.2	60.0	33.8	Complied

Results: Neutral / Average

Frequency (MHz)	Line	Level (dBμV)	Limit (dBµV)	Margin (dB)	Result
0.231	Neutral	20.3	52.4	32.1	Complied
0.236	Neutral	20.9	52.3	31.4	Complied
0.434	Neutral	23.0	47.2	24.2	Complied
0.434	Neutral	23.0	47.2	24.2	Complied
5.456	Neutral	19.7	50.0	30.3	Complied
13.583	Neutral	18.5	50.0	31.5	Complied

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Transmitter AC Conducted Spurious Emissions (continued)



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1625	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
A004	LISN	Rohde & Schwarz	ESH3-Z5	890604/027	18 Nov 2014	12
A1830	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100668	27 Feb 2015	12
M1263	Test Receiver	Rohde & Schwarz	ESIB 7	100265	14 Oct 2014	12

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5.2.2. Transmitter Fundamental Field Strength

Test Summary:

Test Engineer:	Andrew Edwards	Test Date:	17 June 2014
Test Sample IMEI:	st Sample IMEI: 004402452705373		

FCC Reference:	Part 15.249(a)(e)
Test Method Used:	As detailed in ANSI C63.10 Section 6.6

Environmental Conditions:

Temperature (℃):	26
Relative Humidity (%):	40

Note(s):

- 1. The final measured value in the tables below incorporates the calibrated antenna factor and cable loss.
- 2. The average level was obtained by subtracting the duty cycle correction (33.5 dB) from the peak level measured as the EUT was not constantly transmitting..

Results: Bottom Channel / Peak

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2403	Horizontal	91.2	114.0	22.8	Complied

Results: Bottom Channel / Average

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2403	Horizontal	57.7	94.0	36.3	Complied

Results: Middle Channel / Peak

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2441	Horizontal	92.6	114.0	21.4	Complied

Results: Middle Channel / Average

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2441	Horizontal	59.1	94.0	34.9	Complied

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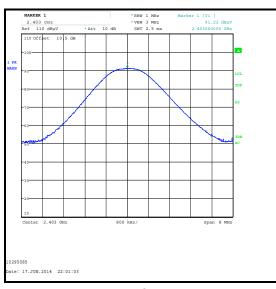
Transmitter Fundamental Field Strength (continued)

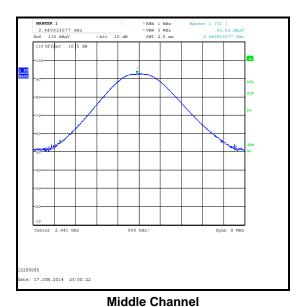
Results: Top Channel / Peak

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2480	Horizontal	90.7	114.0	23.3	Complied

Results: Top Channel / Average

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2480	Horizontal	57.2	94.0	36.8	Complied





Bottom Channel

*REW 1 MME Marker 1 [71]

*Ref 110 dBmyV *Att 10 dB SNT 2.5 ms 2.48002641 GHz

110 Off et 10.5 dB 2.48002641 GHz

110 Off et 10.5 dB 2.48002641 GHz

100 SNT 2.5 ms 2.48002641 GHz

100 SN

Top Channel

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<u>Transmitter Fundamental Field Strength (continued)</u> <u>Test Equipment Used:</u>

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	02 May 2015	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1874	Test Receiver	Rohde & Schwarz	ESU26	100553	13 May 2015	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

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5.2.3. Transmitter Duty Cycle

Test Summary:

Test Engineer:	Andrew Edwards	Test Date:	18 June 2014
Test Sample IMEI:	004402452705373		

FCC Reference:	Part 15.35(c)
Test Method Used:	As detailed in ANSI C63.10 Section 7.5

Environmental Conditions:

Temperature (℃):	25
Relative Humidity (%):	39

Note(s):

1. In order to assist with the determination of the average level of fundamental and spurious emissions field strength, measurements were made of duty cycle to determine the transmission duration and the silent period time of the transmitter. The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by 20 log(On Time / [Period or 100 ms whichever is the lesser)

Duty cycle = 20 Log ((211.538
$$\mu$$
s) / (10.038 ms))
Duty cycle = 20 Log (0.0211)
Duty cycle = 33.5 dB

2. The measurement was performed using a radiated sample in a fully anechoic chamber (Asset Number K0002) at a distance of 3 metres.

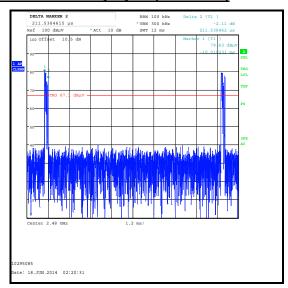
Results:

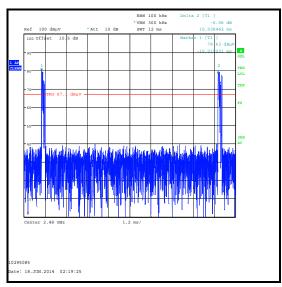
Pulse Duration	Duty Cycle		
(μs)	(dB)		
211.538	33.5		

Period (ms)	
10.038	

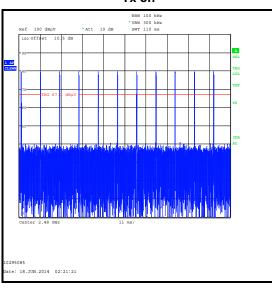
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Transmitter Duty Cycle (continued)





Tx on



Tx on+off

Tx on 100 ms

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	02 May 2015	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1874	Test Receiver	Rohde & Schwarz	ESU26	100553	13 May 2015	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

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5.2.4. Transmitter 20 dB Bandwidth

Test Summary:

Test Engineer:	Nick Steele	Test Date:	17 June 2014
Test Sample IMEI:	004402452706090		

FCC Reference:	Part 2.1049
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1

Environmental Conditions:

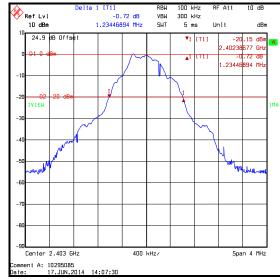
Temperature (℃):	26
Relative Humidity (%):	35

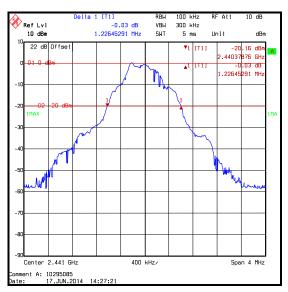
Results:

Channel	20 dB Bandwidth (kHz)
Bottom	1234.469
Middle	1226.453
Тор	1234.469

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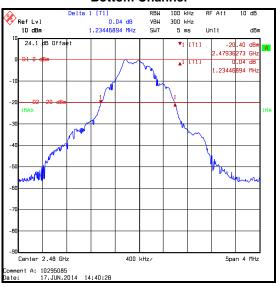
Transmitter 20 dB Bandwidth (continued)





Middle Channel





Top Channel

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Transmitter 20 dB Bandwidth (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1657	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842 659/016	19 Aug 2014	12
A1998	Attenuator	Huber & Suhner	6820.17.B	07101	Calibrated before use	-
G0608	Signal Generator	Rohde & Schwarz	SMIQ 06B	838341/033	14 Feb 2015	12
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	08 Apr 2016	24
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	23 Apr 2016	24
A1256	Power Supply Unit	Farnell	11E30/1B	000378	Calibrated before use	-
M1229	Multimeter	Fluke	179	87640015	24 Apr 2015	12

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5.2.5. Transmitter Radiated Emissions

Test Summary:

Test Engineer:	Andrew Edwards	Test Date:	18 June 2014
Test Sample IMEI:	004402452705373		

FCC Reference:	Parts 15.249(d)(e) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.5 referencing ANSI C63.4
Frequency Range	9 kHz to 1000 MHz

Environmental Conditions:

Temperature (℃):	26
Relative Humidity (%):	30

Note(s):

- 1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- 2. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the top channel only.
- 3. In accordance with FCC part 15.33, pre-scans were performed from 9 kHz to 30 MHz. As there were no emissions observed within 20 dB of the limit, in accordance with 15.31(o), no pre-scans are included in this test report. The pre-scans are kept on file and available upon request.
- 4. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table below.
- 5. Measurements below 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

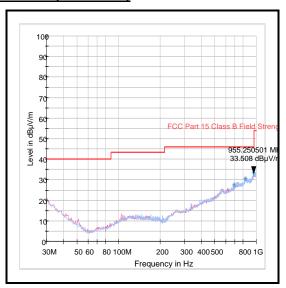
Results: Quasi-Peak

	Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
I	955.251	Vertical	33.5	46.0	12.5	Complied

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Transmitter Radiated Emissions (continued)



Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A490	Antenna	Chase	CBL6111A	1590	29 Apr 2015	12
A1834	Attenuator	Hewlett Packard	8491B	10444	15 Nov 2014	12
G0543	Amplifier	Sonoma	310N	230801	19 Aug 2014	3
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	15 Feb 2015	12
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	Not stated	31 Dec 2014	12

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Transmitter Radiated Emissions (continued)

Test Summary:

Test Engineer:	Andrew Edwards	Test Date:	18 June 2014
Test Sample IMEI:	004402452705373		

FCC Reference:	Parts 15.249(d)(e) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4
Frequency Range	1 GHz to 25 GHz

Environmental Conditions:

Temperature (℃):	25
Relative Humidity (%):	39

Note(s):

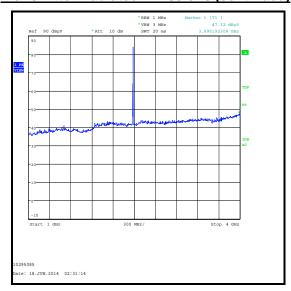
- 1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- 2. The emission shown on the 1 GHz to 4 GHz plot is the EUT fundamental at 2480 MHz.
- 3. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table below. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.
- 4. Pre-scans above 1 GHz were performed in a fully anechoic chamber (Asset Number K0002) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 metres above the test chamber floor, in line with the EUT. Final measurements above 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

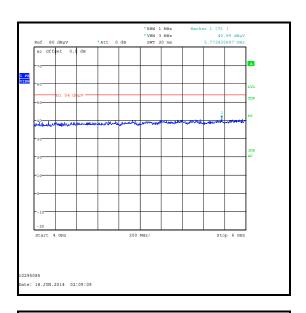
Results: Top Channel

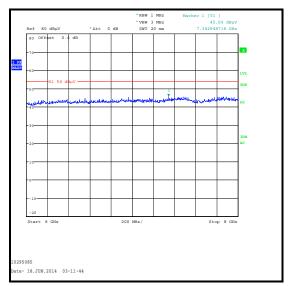
Frequency (MHz)	Antenna Polarity	Peak Level (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)	Result
16536.058	Vertical	50.4	54.0	3.6	Complied

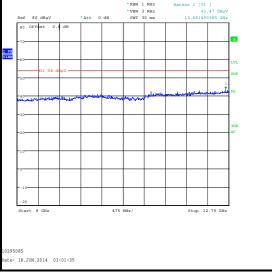
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Transmitter Radiated Emissions (continued)



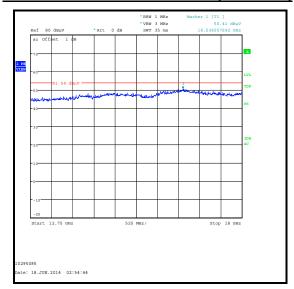


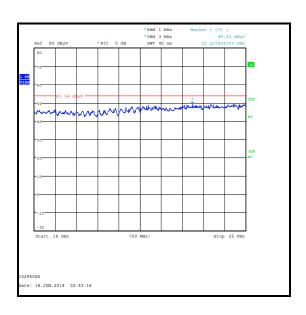




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Transmitter Radiated Emissions (continued)





Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A253	Antenna	Flann Microwave	12240-20	128	14 Nov 2014	12
A254	Antenna	Flann Microwave	14240-20	139	14 Nov 2014	12
A255	Antenna	Flann Microwave	16240-20	519	14 Nov 2014	12
A256	Antenna	Flann Microwave	18240-20	400	14 Nov 2014	12
A436	Antenna	Flann Microwave	20240-20	330	14 Nov 2014	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
A1975	High Pass Filter	AtlanTecRF	AFH-03000	090424010	12 Apr 2015	12
A2176	High Pass Filter	AtlanTecRF	AFH-07000	800980	12 Apr 2015	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1874	Test Receiver	Rohde & Schwarz	ESU26	100553	13 May 2015	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

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ISSUE DATE: 01 AUGUST 2014

5.2.6. Transmitter Band Edge Radiated Emissions

Test Summary:

Test Engineer:	Andrew Edwards	Test Date:	17 June 2014
Test Sample IMEI: 004402452705373			

FCC Reference:	Parts 15.249(d) & 15.209
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.2

Environmental Conditions:

Temperature (℃):	26
Relative Humidity (%):	39

Note(s):

- 1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- 2. The average level was obtained by subtracting the duty cycle correction (33.5 dB) from the peak level measured.
- 3. *-20 dBc.

Results: Peak

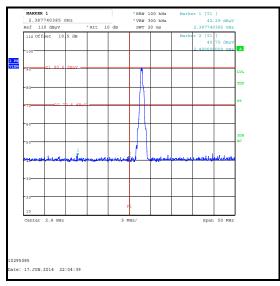
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2387.740	Horizontal	42.3	70.6*	28.3	Complied
2400	Horizontal	40.8	70.6*	29.8	Complied
2483.5	Horizontal	52.2	74.0	21.8	Complied
2491.192	Horizontal	53.8	74.0	20.2	Complied

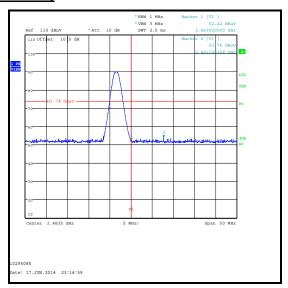
Results: Average

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Horizontal	18.5	54.0	35.5	Complied
2491.192	Horizontal	20.3	54.0	33.7	Complied

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Transmitter Band Edge Radiated Emissions (continued)





Lower Band Edge Measurement

Upper Band Edge Measurement

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	02 May 2015	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1874	Test Receiver	Rohde & Schwarz	ESU26	100553	13 May 2015	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

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6. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±4.69 dB
Fundamental Field Strength	2.4 GHz to 2.4835 GHz	95%	±2.94 dB
Occupied Bandwidth	2.4 GHz to 2.4835 GHz	95%	±3.92 %
Radiated Spurious Emissions	30 MHz to 1 GHz	95%	±5.65 dB
Radiated Spurious Emissions	1 GHz to 25 GHz	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

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7. Report Revision History

Version	Revision Details			
Number	Page No(s) Clause Details		Details	
1.0	-	-	Initial Version	
2.0	-	-	EUT Description update	

--- END OF REPORT ---

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